



February 10, 1994

Ms. Liza I. Montalvo
Remedial Project Manager
Kentucky/Tennessee Section
U.S. EPA
Region IV
345 Courtland Street, N. E.
Atlanta, GA 30365

Re: Results of Air Quality Monitoring - FY 94 Second Quarter (FY94-2Q), Lees' Lane Superfund Site, Jefferson County, Kentucky Administrative Order on Consent, U. S. EPA Docket No. 91-32-C

Dear Ms. Montalvo:

In accordance with Paragraph 11, under, Reporting Requirement, of the subject Consent Order and Attachment I, Operation and Maintenance Plan for Post-Removal Site Control at the Lees' Lane Landfill Site, Section 4.2, Air Quality Monitoring, attached for your information and files is one photocopy each of the following letter of February 3, 1994, analyses and sampling location map prepared by Radian Corporation, P. O. Box 13000, Research Triangle Park, North Carolina 27709, as received by MSD on February 4, 1994:

1. Radian Corporation letter, dated February 3, 1994, 2 pages.
2. Figure 1, Lees Lane Landfill, Sampling Locations, 1 page.
3. Table 1, TO-14 Data Summary for Ambient Air Samples at the Lees' Lane Landfill, Sampling date: 11/16/93, 1 page.
4. Table 2, On-Site Meteorological Data, 11/16/93, 1 page.
5. Radian Corporation, Table 3, TO-14 Data Summary for Gas Monitoring Well Samples at the Lees' Lane Landfill, Sampling date: 11/16/93, 1 page.

DOCUMENT CONTROL NUMBER 4400-83-AGNB



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Ms. Liza I. Montalvo
February 10, 1994
Page 2

Please advise if you have any questions concerning these sampling arrangements.

Very truly yours,

A handwritten signature in cursive script, reading 'C. A. Neumayer', is written over the typed name. The signature is fluid and extends to the right with a long horizontal stroke.

C. A. Neumayer
Director of Operations

CAN/dc
CAN32-1e

cc: KNREPC, Attn: Mr. Rick Hogan
Division of Waste Management
G. R. Garner, Executive Director
File WD-2 (Lees Lane M & M Quarterly)

RADIAN
CORPORATION

February 3, 1994

Progress Center
3200 E. Chapel Hill Rd./Nelson Hwy.
P.O. Box 13000
Research Triangle Park, NC 27709
(919) 481-0212

Mr. Dan Sammons
Chief Chemist
Louisville Metropolitan Sewer District
4522 Algonquin Parkway
Louisville, Kentucky 40211

Dear Dan,

Enclosed is the summary analytical report for the ambient and gas monitoring well samples collected at the Lee's Lane Landfill site on November 16, 1993.

A map of the site has been labelled with the sample collection locations for your reference in Figure 1. Table 1 is a tabular summary for the ambient sample with the primary analytes required for submission to EPA.

The monitoring sites for this quarterly collection were chosen based on a combination of prevailing on-site meteorology and available sites in the adjacent residential neighborhood per the standard sampling protocol. It was mild and sunny for most of the monitoring day with a slight southeast breeze in the afternoon. Hourly readings of wind speed and direction from an on-site source were recorded by LMSD personnel. The meteorological data is summarized in Table 2. The wind direction and speed, from 2:00 PM until the end of the monitoring day, was collected from Standiford Field Airport because the on-site meteorological station was pilfered. The ambient samples were collected 3-5 feet above ground level. The ambient samples collected were integrated over a 7-8 hour collection period in Summa® canisters.

The methane analysis was performed by GC/FID on a separate analytical column prior to the TO-14 analysis. The methane analysis indicated levels at or near the analytical detection limit. The TO-14 analytical methodology by Gas Chromatography/Mass Spectrometry (GC/MS) was employed for this set of quarterly samples. The GC/MS was chosen to confirm the presence of TO-14 compounds and other Tentatively Identified Compounds (TIC's).

Table 3 is a tabular summary of the gas well samples with the primary analytes required for submission to EPA. Each set of gas monitoring wells was screened with field monitors (OVA-128, combustible gas meter, and PhotoTip). The field measured values for methane were recorded by the OVA-128. The OVA values were used to select the wellhead [Shallow (S) or deep (D)] for subsequent collection of the canister sample.

Mr. Dan Sammons
February 3, 1994
Page 2

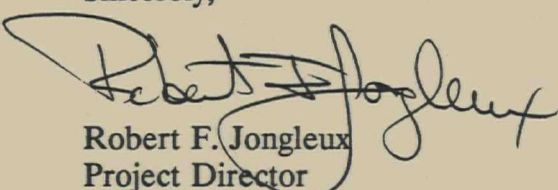
The methane analysis was done by Gas Chromatography/Flame Ionization Detection (GC/FID) at Radian's Perimeter Park Laboratory. Sample canisters and flow controllers were cleaned and blanked by TO-12 for total hydrocarbons prior to field deployment. Samples were handled with standard laboratory chain of custody procedures. The GC/MS confirmation by TO-14 was also performed at Radian's Perimeter Park Laboratory this quarter.

The laboratory determined methane results are consistent for both the ambient air and the gas monitoring wells. The laboratory determined methane values are higher than the reported field values due to the inherently greater analytical sensitivity. The field measurements from the OVA, Hnu, PhotoTip and Exotox are summarized in Table 4. Values from the field survey instruments were quite low, particularly in comparison to the last quarterly survey. The laboratory measured methane results do not vary greatly from the past sampling periods.

The TO-14 results by GC/MS analysis of the Summa® canisters are generally at or below the analytical detection limits. Very few TO-14 compounds were detected in either the ambient or gas well samples. The presence of methylene chloride at very low concentrations was confirmed in 2 of the ambient air samples and one of the gas well samples. The concentration of other primary analytes of benzene, toluene, xylene and vinyl chloride are similarly at or near the analytical detection limits.

Radian appreciates the opportunity to assist your staff with this project. Please advise me at (919) 481-0212 if you have any questions.

Sincerely,



Robert F. Jongleux
Project Director

RFJ/pjsj116

Attachments

cc: G.A. Holliden, Radian/LOU
Jay A. Snyder, Radian/RTP

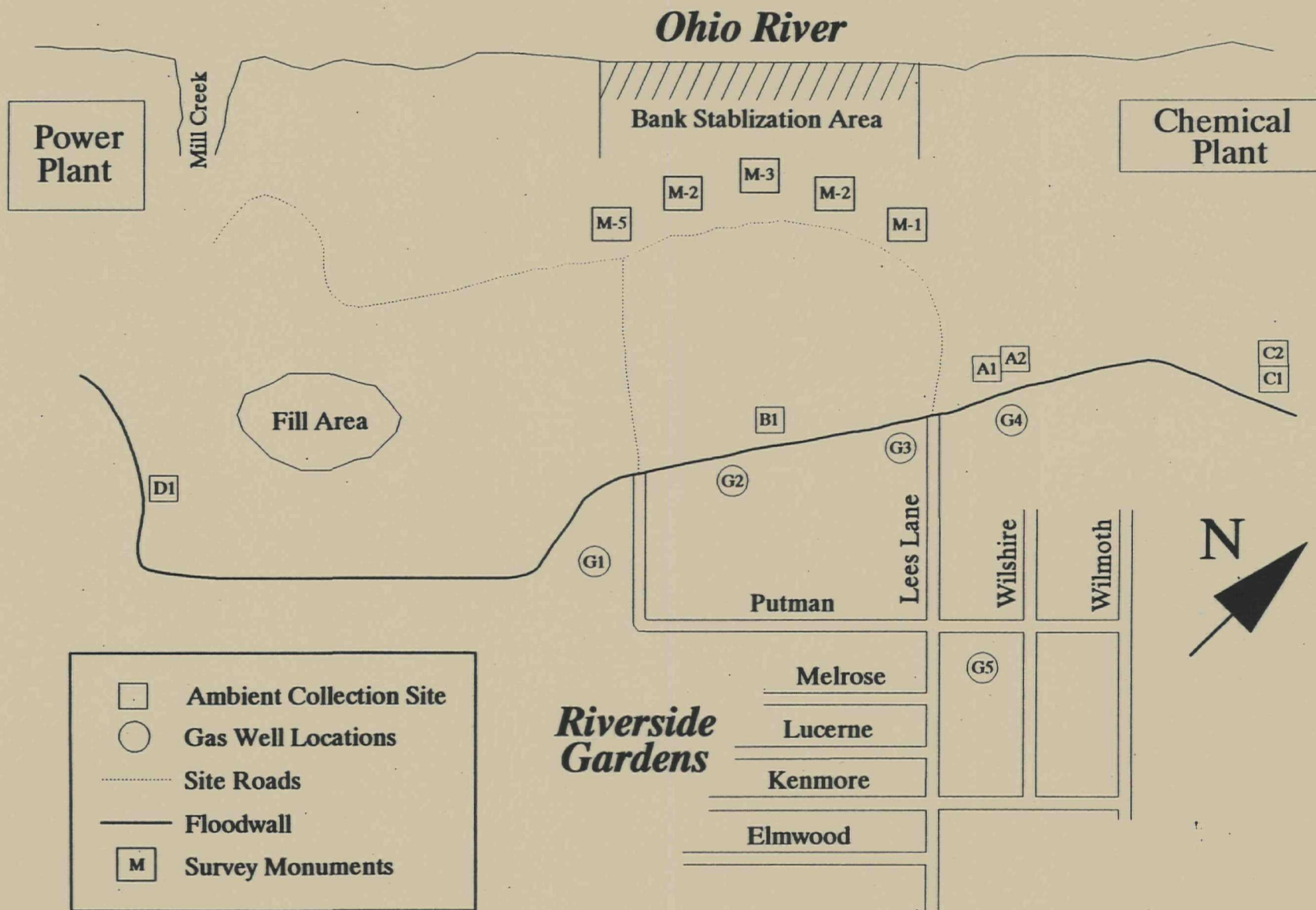


Figure 1. Lees Lane Landfill Sampling Locations

Not to scale.

TABLE 1

**TO-14 DATA SUMMARY FOR AMBIENT AIR SAMPLES AT THE LEES'S LANE LANDFILL
LOUISVILLE, KENTUCKY**

SAMPLING DATE: 11/16/93

Sample ID	AS-U1	AS-A1	AS-A2	AS-R1	AS-R2	AS-R3
Canister ID	A141752	A127734	A127724	A167612	A127721	A141750
Location	Upwind	Downwind	Downwind	Residential	Residential	Residential
Dilution Factor	.9092	.8667	.8780	.9009	.8572	.8792
Compound (conc. in ppbv)						
Benzene	0.36	0.31	.39	0.34	0.54	0.36
Toluene	1.09	1.03	1.09	1.05	4.07	0.96
Xylene (total)	0.71	0.58	0.72	0.57	1.54	0.77
Methylene Chloride	<0.30	<0.30	<0.30	1.94	<.30	0.43
Vinyl Chloride	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methane (ppm)	2.75	2.06	2.30	2.35	1.99	2.21

Note: less than values indicate compound was at or below the analytical detection limit.

TABLE 2
ON-SITE METEOROLOGICAL DATA
NOVEMBER 16, 1993

Time	Barometric Pressure (in Hg)	Humidity (%)	Wind Direction	Wind Speed (mph)	Observations
730	30.34	100	E	0	Cloudy
800	30.36	100	E	0	Cloudy
830	30.36	100	E	0	Cloudy
900	30.36	96	E	0	Partly Cloudy
930	30.36	96	SE	0	Mostly Sunny
1000	30.35	89	SE	0	Sunny
1030	30.35	89	S	0	Sunny
1100	30.34	83	S	0	Sunny
1130	30.34	83	SW	0	Sunny
1200	29.80	77	SW	0	Sunny
1230	29.80	77	SW	0	Sunny
1300	29.77	77	SW	1	Sunny
1330	29.77	77	SE	2	Sunny
1400	29.72	77	SE*	10*	Partly Cloudy
1430	29.72	77	SE	10	Partly Cloudy
1500	29.68	77	SE	6	Partly Cloudy
1530	29.68	77	SE	6	Cloudy
1600	29.67	77	E	6	Cloudy
1630	29.67	77	E	6	Cloudy

* - Succeeding wind directions and speeds recorded at Standiford Field Airport,
due to weather station being pilfered.

** Compiled by LMSD personnel at Lee's Lane Landfill Site **

TABLE 3

**TO-14 DATA SUMMARY FOR GAS MONITORING
WELL SAMPLES AT THE LEE'S LANE LANDFILL
LOUISVILLE, KENTUCKY**

SAMPLING DATE: 11/16/93

Sample ID	AS-G1S	AS-G2D	AS-G3D	AS-G4D	AS-G5V	AS-G5D	FBL
Canister ID	A127727	A127732	A127729	A127733	A141754	A141767	A141762
Dilution Factor	.9610	.9396	.5959*	.9481	.9352	.6681*	1
Orifice	D-B1	D-33	D-6	D-104	D-3	D-8	--
Compound (conc. in ppbv)							
Benzene	.26	.11	.12	.40	.33	<.10	<.10
Toluene	2.30	.23	.27	4.51	.61	.27	<.10
Xylene (total)	<.75	<.20	<.20	1.27	.43	<.20	<.20
Methylene Chloride	<.30	<.30	<.30	<.30	<.30	.60	<.30
Vinyl Chloride	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methane (ppm)	2.13	0.75	0.88	1.20	2.26	0.46	ND

* - A dilution factor of 0.9422 was used for AS-G3D and 0.8977 for AS-G5N in the methane analysis.
Note: Less than values indicate compound was at or below the analytical detection limit

**FIELD DATA SUMMARY FOR GAS WELL MONITORING AT THE LEE'S LANE LANDFILL
LOUISVILLE, KENTUCKY (11/16/93)**

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